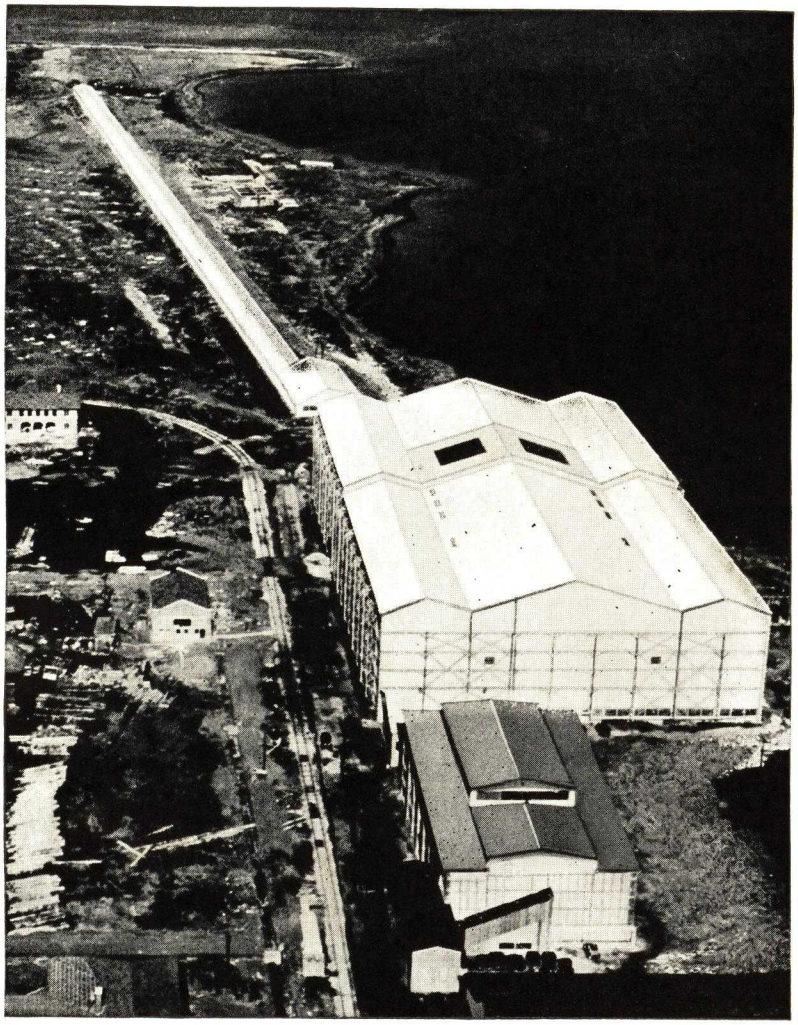
Careystone

CORRUGATED ASBESTOS-CEMENT ROOFING AND SIDING



THE PHILIP CAREY COMPANY, CINCINNATI, OHIO

INTRODUCTION

In the preparation of this catalogue it has been the aim of THE PHILIP CAREY COMPANY to present fundamental data regarding the manufacture and application of Careystone Corrugated Asbestos—Cement Roofing and Siding in such form as to be of maximum use to the engineer and architect.

Because of its unusual characteristics this product has become increasingly popular during the last few years. However, as is the case with any material, a satisfactory job depends upon careful, well-studied plans and correct installation. It is the hope of the company that the information contained herein will prove of assistance to the engineer in securing completely successful work.

The manufacture of Corrugated Asbestos-Cement Roofing and Siding involves far more than merely mixing asbestos fibre and portland cement and pouring it on a corrugated form. It is a highly developed manufacturing operation requiring a large initial investment for special equipment, which, when properly installed, must be operated by a competent, qualified and trained corps of engineers and technicians. A detailed description of this process is given on the following page.

THE COMPANY

THE PHILIP CAREY COMPANY, founded in 1873, has enjoyed more than sixty years of continued progress and prosperity and is, today, universally recognized as one of the leaders of the industrial world. Having vast resources, both natural and financial, the company is directed and managed by thoroughly trained executives, who control the intricate problems of manufacture from the basic raw materials to the finished product. The required equipment has been especially designed and our procedure of manufacturing control, through our Research Laboratory, insures to our clients and customers the finest and most skillfully designed corrugated asbestos roofing and siding possible to manufacture even in these modern times.

ENGINEERING SERVICE

An efficient staff of engineers is maintained and their services are at the disposal of our customers. Their wide experience covers the recommendation and application of Careystone Corrugated Asbestos Roofing and Siding on thousands of factories, railroad buildings, aeroplane hangars, warehouses, power plants, foundries, chemical plants—in fact, every conceivable type of industrial building. This service includes the preparation of detailed estimates, sheet lay-outs, and many helpful suggestions for the use and application of Careystone Corrugated Asbestos Roofing and Siding, for which there is no charge. Address any of the Branch Offices or Distributors listed on the back cover or the Home Office.

Carey PRODUCTS

REG. U.S. PAT. OFF.

- Carey Built-up Roofing
- Carey Roof and Metal Protective Paints
- Carey Elastite Asphalt Plank
- Carey Elastite Expansion Joint
- Carey Asphalt Primer
- Carey Manco Asphalt
- Carey Elastite Track Insulations
- Carey Elastite Crossing Pavement
- Carey Alumino-Hi-Temp
- Carey Rock Wool Blankets
- Carey Thermolite Blocks and Sheets
- Carey Insulating Cements
- Carey Refractory Cements
- Carey Insulating Sheets and Panels
- Carey Insulating Powders, Pipe Coverings, Felts and Coatings
- Carey Panel Board
- Carey Asbestos-Cement Shingles
- Carey Asfaltslate Shingles
- Carey Strip Shingles
- Carey 85% Magnesia
- Carey Hi-Temp No. 12
- Carey Underground and Exposed Pipe Insulations
- Carey Cold Water Insulations
- Carey Weather-Proofing Products

THE PHILIP CAREY COMPANY

LOCKLAND, CINCINNATI, OHIO

FRONT COVER

The aerial view on the front cover shows the laboratories of the National Advisory Committee for Aeronautics, Langley Field, Va. The buildings shown are the "N. A. C. A. Tank," the Full Scale Wind Tunnel and the Propeller Research Tunnel. Careystone Roofing and Siding used on all buildings. (More than 95 carloads.)

Careystone

REG. U.S. PAT. OFF.

CORRUGATED ASBESTOS-CEMENT ROOFING AND SIDING

Careystone Corrugated Asbestos-Cement Roofing and Siding is manufactured by a scientific process combining two of the most durable products known to mankind—Asbestos and Portland Cement.

ASBESTOS

Asbestos is one of the most remarkable of minerals. Its valuable properties have been known for thousands of years, as is proved by many authenticated records. Mined extensively by the Romans, its use has been traced through ancient and medieval history to the present era, and today, without Asbestos, there could be no modern industry. It is much older than anything in the vegetable or animal kingdom, and it is so little affected by the deteriorating influences of Time, that though the rocks in which it is contained have crumbled away there has been no appreciable effect on the Asbestos found in them. Its unique properties of fire resistance, low thermal conductivity, and resistance to the attacks of acid and alkalies are unparalleled in Nature.

PORTLAND CEMENT

Portland Cement, as is well known, besides being insoluble and weather and fire resisting, possesses the peculiar property of increasing in toughness and strength upon exposure to the elements. Today, Portland Cement is universally known and used in all types of building construction, where the essential requirements are strength, permanence, fire safety, economy and longevity.

CAREYSTONE CORRUGATED ASBESTOS

By the special Carey manufacturing process, long tough fibers of asbestos are crisscrossed, interwoven, merged together and embedded in a carefully selected grade of portland cement. This rugged mixture is placed on carrier trays, sent through a huge press, and permanently combined under an enormous pressure. Made solely from these two durable and fireproof minerals, Careystone Corrugated Asbestos-Cement Roofing and Siding is a permanent material, possessing natural properties that enable it to resist the action of the elements and the many and varied destructive influences existing in most industrial plants.

Careystone Corrugated Asbestos-Cement Roofing and Siding is non-combustible and offers a resistance to fire which is unsurpassed in other roofing or siding materials. Containing nothing that can rust, rot, or corrode, Careystone has been used extensively for roofing and siding in chemical plants, where acid and alkali fumes are always prevalent. The railroads have been large users of this modern building product, for they have found that its use reduces overhead and maintenance to a minimum. Unlike most metals it is unaffected by salt air and its use is thus becoming more popular by industries located on the seaboard.

Engineering authorities agree that the crystallizing or "setting" action of cement continues for many years and thus Careystone Corrugated Asbestos-Cement Roofing and Siding, unlike nearly every other roofing and siding material, actually grows stronger with age.

Made solely from asbestos fibre and portland cement, Careystone gives permanent service without maintenance, for *it requires no paint or protective coating of any kind.* The first cost is the last cost—maintenance costs are eliminated.

The color of Careystone Corrugated Asbestos-Cement Roofing and Siding is a pleasing cement gray. This light color reflects the rays of the sun and this fact combined with the knowledge that the material has a high asbestos content (one of the best known insulations), indicates that the inside temperature of any building on which it has been used will be materially lower during the hot summer days. Other colors, such as red, green, brown, burnt orange may be specially manufactured if desired.

TECHNICAL AND ESTIMATING DATA

GENERAL SPECIFICATIONS

Careystone Corrugated Asbestos Cement Roofing and Siding sheets are 42 in. wide, being 16 full corrugations of 2⅝ in. each. Standard lengths are as follows: 3 ft. 0 in., 3 ft. 6 in., 4 ft. 0 in., 4 ft. 6 in., 5 ft. 0 in., 5 ft. 6 in., 6 ft. 0 in., 6 ft. 6 in., 7 ft. 0 in., 7 ft. 6 in., 8 ft. 0 in., 8 ft. 3 in., 8 ft. 6 in., 8 ft. 9 in. 9 ft. 0 in., 9 ft. 3 in., 9 ft. 6 in., 9 ft. 9 in., 10 ft. 0 in.

It is manufactured in three thicknesses: Medium, Standard and Heavy. The Medium has an average thickness of ¼ in.; the Standard has an average thickness of $\frac{9}{32}$ in.; and the Heavy has an average thickness of $\frac{5}{16}$ in. The thickness of the material used has no direct bearing on its longevity; the heavier sizes are manufactured to provide increased load-bearing capacity on wider spans.

Maximum Purlin and Girt Spans

	Roofing	Siding
Medium, ¼ in. average thickness		5 ft. 0 in.
Standard, $\frac{9}{32}$ in. average thickness	4 ft. 0 in.	5 ft. 6 in.
Heavy, $\frac{5}{16}$ in. average thickness	4 ft. 6 in.	6 ft. 0 in.

Weights per Square Foot

	Uncrated	Crated
Medium, ¼ in. average thickness	2.9 lbs.	3.3 lbs.
Standard, $\frac{9}{32}$ in. average thickness	3.3 lbs.	3.75 lbs.
Heavy, $\frac{5}{16}$ in. average thickness	3.75 lbs.	4.25 lbs.

Less than carload shipments weighing less than 10,000 lbs. will always be crated.

MATERIAL REQUIRED

SHEETS

Sheets to be used for either roofing or siding must be figured to have a side lap of two corrugations (5¼ in.) and an end lap of not less than 6 in. In special cases, as a matter of economy, when the sheets are to be used as siding, the side lap may be reduced to one corrugation (2⅝ in.) and an end lap of not less than 4 in. All end laps must occur at all times over a purlin or girt.

When designing trusses and the spacing of purlins or girts, it is desirable to figure on using sheets of stock lengths. Whenever it is necessary to use sheets not of stock lengths, figure the next longest stock length. No charge for cutting.

To determine the number of sheets required per course, taking into consideration the proper allowance for a two corrugation side lap, multiply the length of the course in *feet* by the unit .3265 rounding out the next full sheet. If the "staggered joint" method of application is to be used, add one additional sheet per course, to take care of cutting.

When one corrugation side lap is to be used, multiply the length of the course in *feet* by the unit .3048, rounding out to the next full sheet. Between doors and windows on siding, and between skylights on roofing, figure the spaces from the door to door, from window to window, and from skylight to skylight as individual courses, but in such cases, it is not necessary to add the additional sheet if the staggered joint method of application is to be used.

The total square footage in the required sheets may be obtained by multiplying the number of sheets of each length by the length of the sheet, and multiplying that product by the unit 3.5.

For example, 200 sheets, 6 ft. 0 in.=1200
300 sheets, 8 ft. 0 in.=2400
100 sheets, 10 ft. 0 in.=1000

4600×3.5=16,100 sq. ft.

RIDGE ROLL AND CORNER ROLL

Ridge Roll is furnished in double sections, self-adjustable to the pitch of any roof. To estimate the required amount, multiply the length of the ridge in feet by the unit 1.1 (which will allow for the necessary 4 in. lap) and round out to the next multiple of 4. Ridge roll is always furnished in sections 4 ft. 0 in. in length.

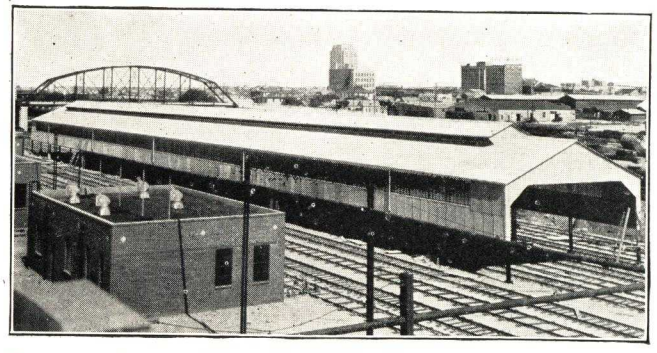
Corner Roll is furnished in 90° angle design with wings of 6 in. and in a standard length of 4 ft. 0 in., for either inside or outside corners. Estimate the quantity required in the same manner as ridge roll, figuring each corner of the building separately.

BOLTS FOR RIDGE ROLL AND CORNER ROLL

For ridge roll and corner roll use 2 in. bolts with nuts, one lead washer and one galvanized washer, figuring 1¼ bolt assemblies per lineal foot double section for ridge roll, and the same quantity per lineal foot of corner roll. See ridge roll detail N, corner roll details O and P (page 10).

FASTENERS AND ACCESSORIES

Data on estimating Fasteners and Accessories will be found under the description of the recommended methods of erection on Pages 4 to 9 inclusive.



Careystone Corrugated Asbestos Roofing and Siding Has Been Used by Many Railroads
This illustration shows the train shed at Big Springs, Tex., for the Texas and Pacific Railroad

The Gulf Refining Company Has Used Careystone Corrugated Asbestos Roofing, Careystone Asbestos Sheathing for Siding and Careystone Asbestos Wallboard on Forty Bulk Stations Similar to the Above

RECOMMENDED METHODS FOR APPLYING CAREYSTONE CORRUGATED ASBESTOS-CEMENT ROOFING AND SIDING

All sheets should be applied with a side lap of two full corrugations (5¼ in.), and an end lap of not less than six inches. At the gables, sheets should not overhang the ends of the purlins more than two corrugations. An overhang at the eaves of from six to nine inches is usually allowable. Sheets in the top course should extend within two inches of the ridge.

All sheets should be of the proper length, as all end laps must occur over a purlin or girt. All fasteners must pass through and clip together both the upper and underlying sheets, and must be drawn up tight against the back of the purlins or girts. When bolts are used, care must be exercised to see that the bolt heads are not drawn up too tight against the lead washer so that it will become distorted.

All application must be started true to line, and care must be exercised to keep the horizontal lines formed by the sheets, and the vertical lines of the side laps, straight and plumb.

When applying sheets on the roof, the liberal use of planks and "chicken ladders" is recommended. Do not subject sheets to undue impact, and be careful to walk on the laps, where the sheets are automatically reinforced by the double thickness. Never walk in the center of the span.

Holes for the introduction of bolts, screws, or tie wires, either for roofing or siding, must always be drilled; the drilling to be done in the crest of the corrugation. Never drill holes in the vales of the corrugations. Sheets must always be drilled; never punched. For drilling holes, excellent results are obtained from an ordinary carbon steel twist drill in a hand or small electric drill. These should be sharpened as if for cast iron or steel work. The drill however, should be fed faster, and will rotate more rapidly than in metal work. No lubricant is necessary. Before drilling measure location of holes exactly to insure proper fit of fasteners.

For sawing and cutting sheets, an ordinary hand saw set five teeth to the inch for cross cutting purposes, may be effectively employed. Excellent results can be obtained from a power hand saw using a carborundum blade.

GROUTING CEMENT AND ROOF PUTTY

Use Carey Grouting Cement for grouting between the aprons of the ridge roll and the vales of the corrugations of the sheets, figuring one pound of Grouting Cement per lineal foot double section of ridge roll.

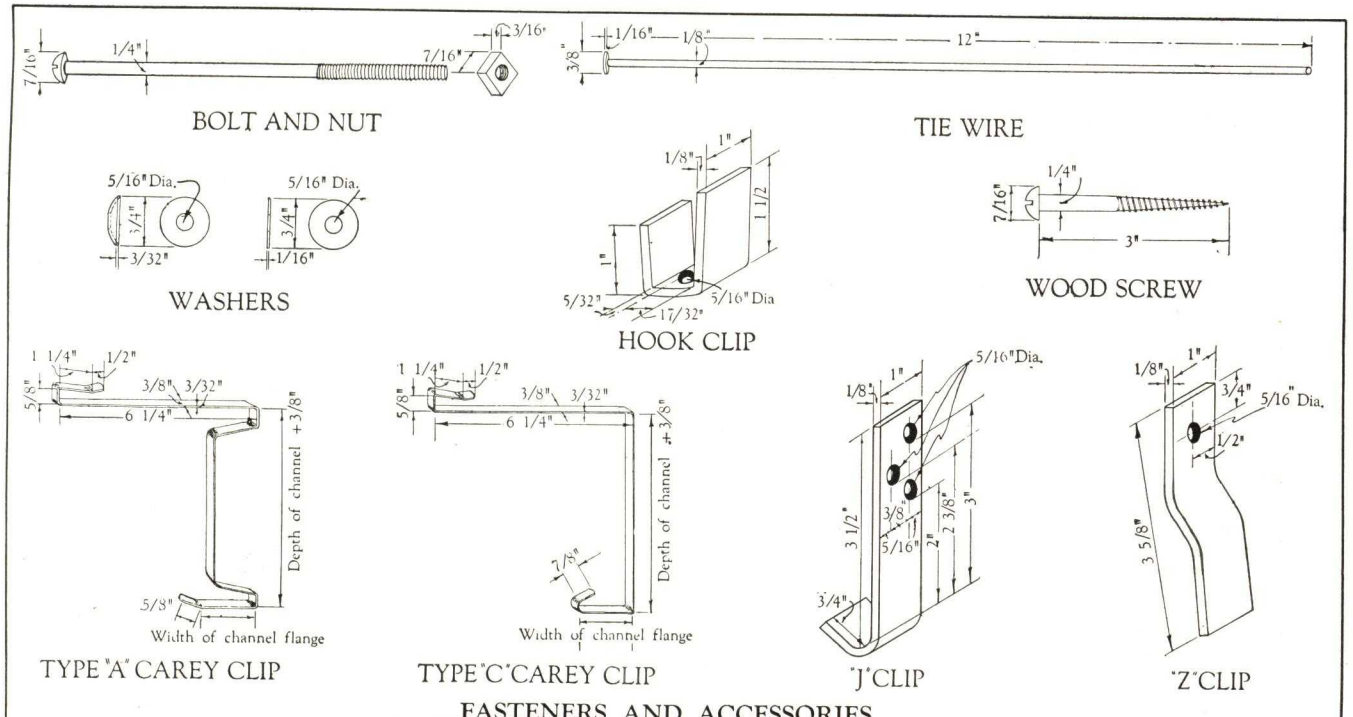
All bolt heads on the roof must be covered with Carey Roof Putty, gray, using ten pounds of roof putty for each five hundred bolts, rounding out to the next unit of ten pounds.

On all roofs having a slope of less than 4 in. in 12 in. all end and side laps must be cemented together with Carey Roof Putty, black, using ten pounds of roof putty per three hundred lineal feet of ¼ in. bead, rounding out to the next unit of ten pounds. All roof putty for side and end laps should be applied with a roof cement gun, using ¼ in. nozzle.

Roof putty should be placed in the vale between the first and second corrugation on the side lap, and three inches below the top of the underlying sheet across the sheet.

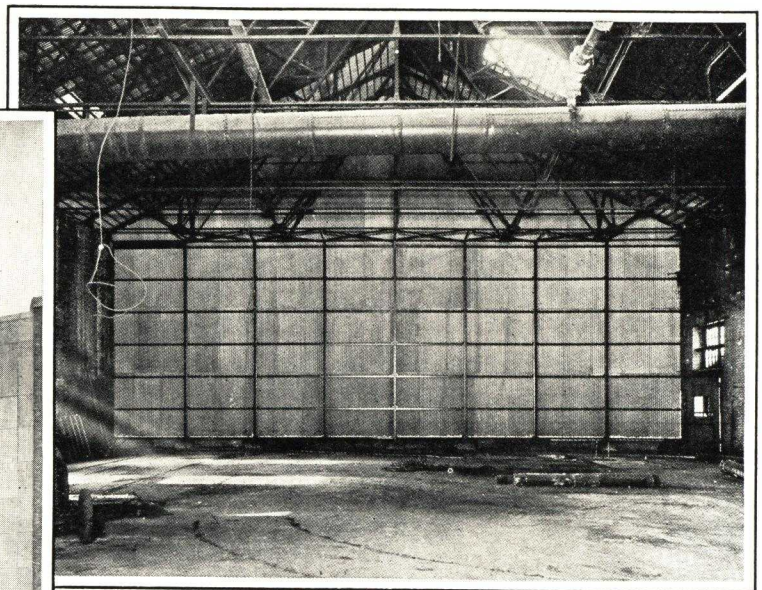
NOTE

All bolts, nuts, clips and iron washers are furnished hot dipped galvanized. All lead washers are cupped. When excessive corrosive action may be expected from acids or alkalies, we urge that you confer with our Engineering Department so that the proper acid or alkali resisting accessories may be recommended.

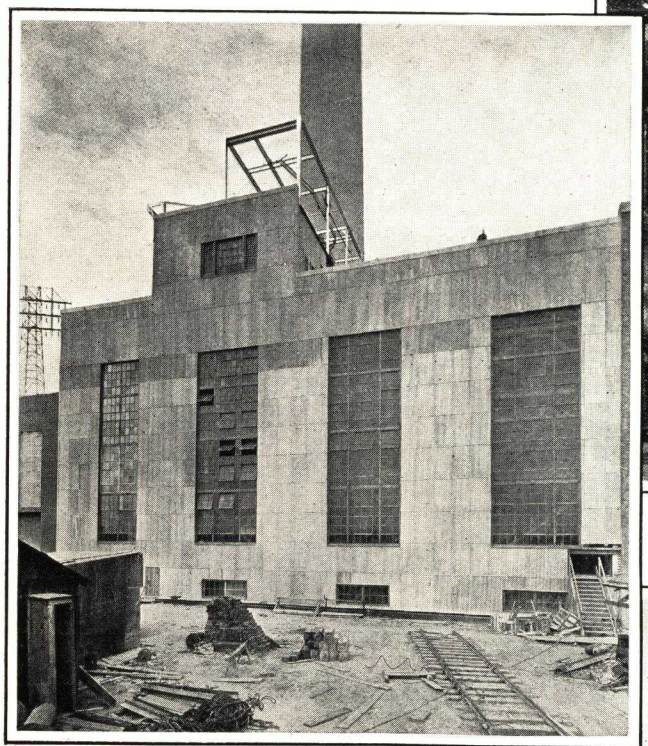


FASTENERS AND ACCESSORIES

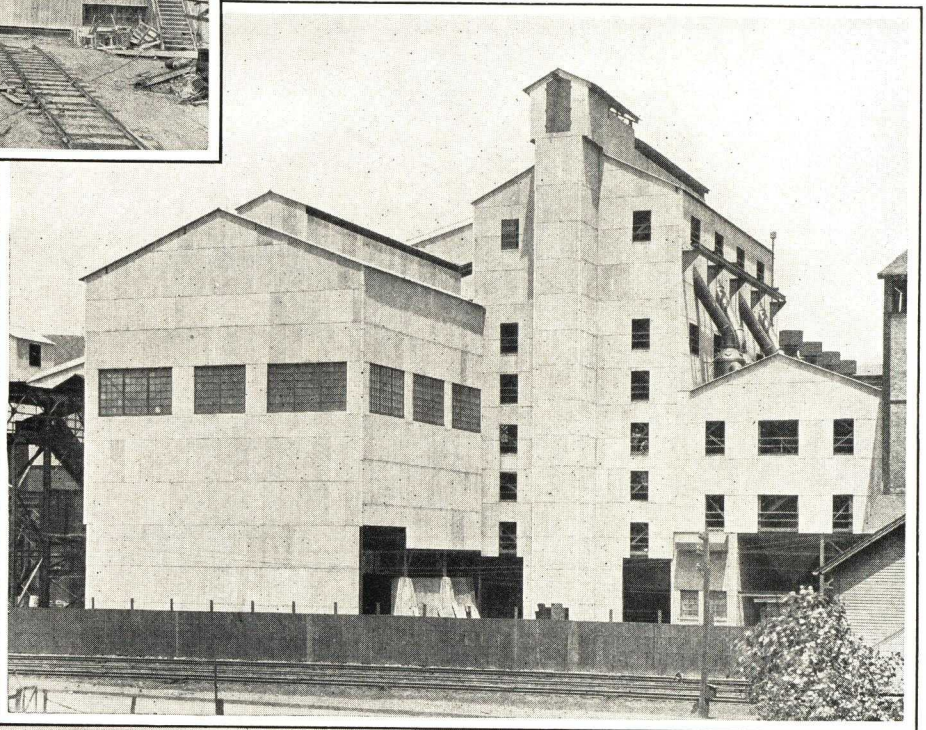
SEVERAL TYPICAL INSTALLATIONS



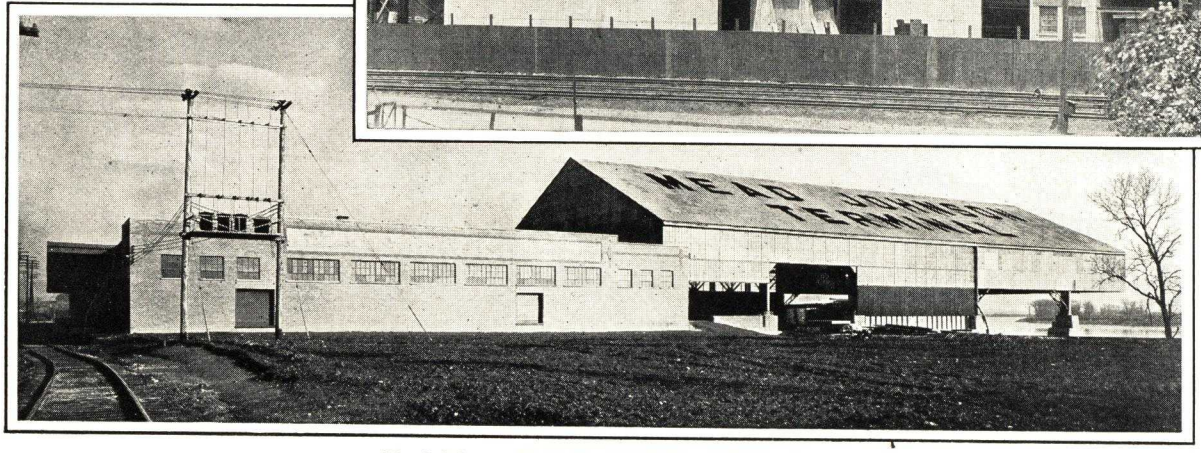
Worcester Gas Company, Worcester, Mass.
Showing corrugated asbestos partition



Houston Power & Light Co.
Deepwater Plant,
Houston, Tex.
American Bond and Share Co.,
New York, N. Y.

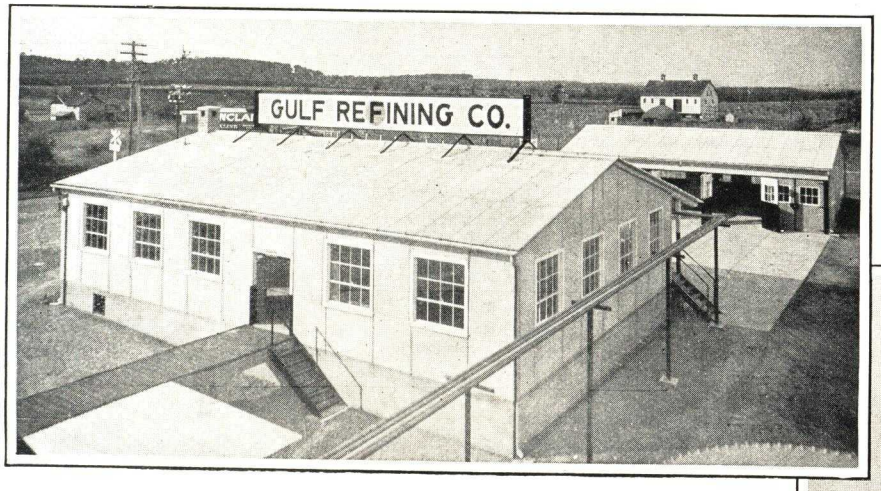


American Steel and Wire Co.
Donora Zinc Works Division,
Donora, Pa.

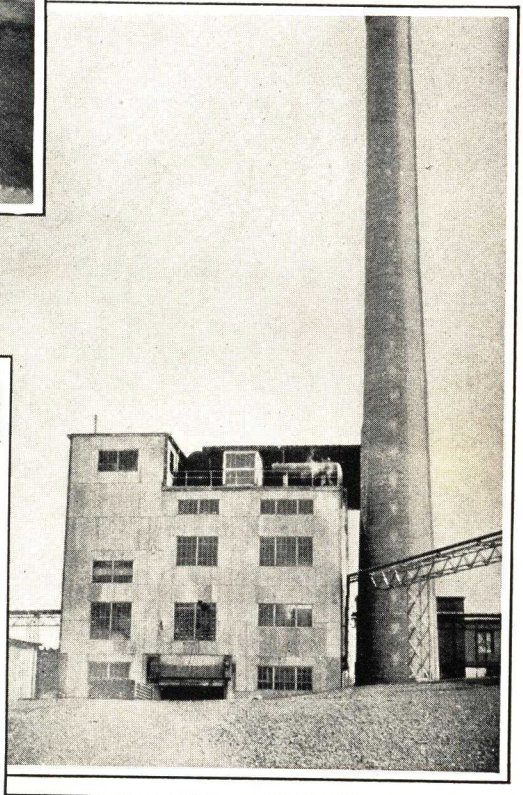


Mead Johnson River Terminal, Evansville, Ind.

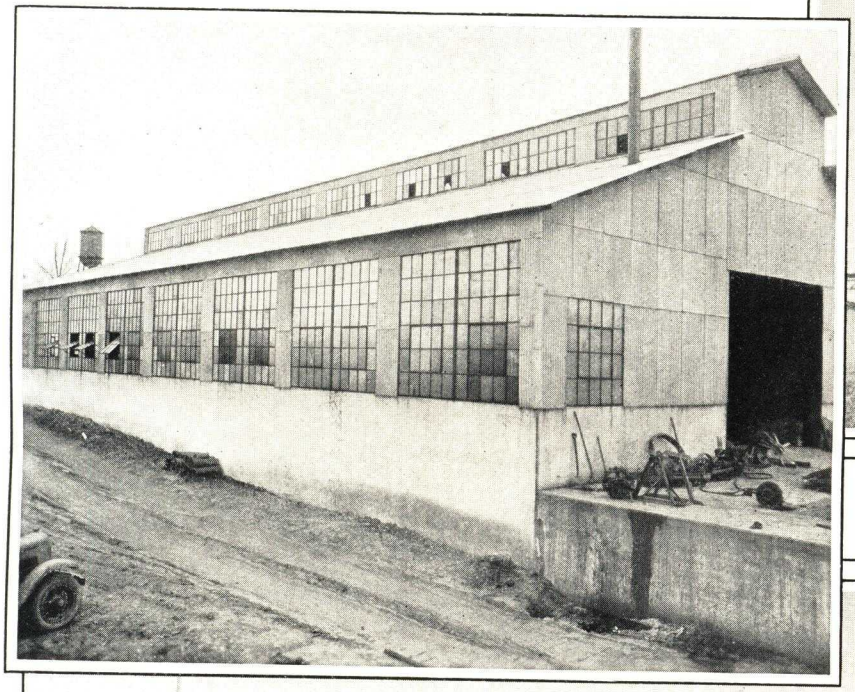
OF CAREYSTONE PRODUCTS



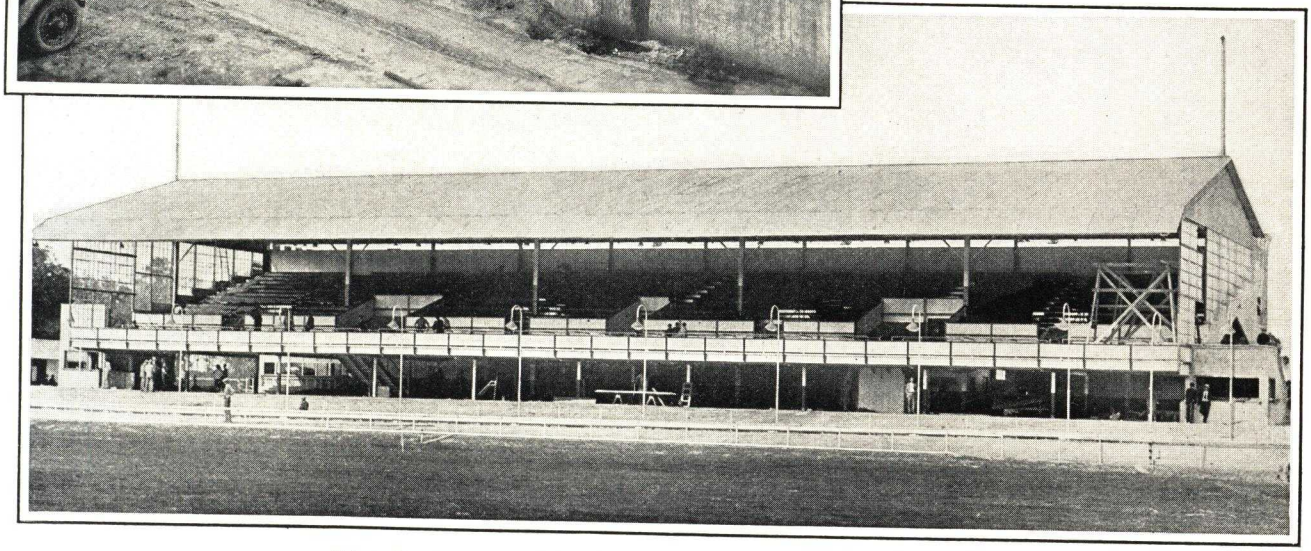
Gulf Refining Company
Bulk Station,
Winchester, Va.



Tennessee Eastman Co., Kingsport, Tenn.



Tennessee State Highway Garage,
Jackson, Tenn.



West Florida Racing and Athletic Association Grand Stand, Tampa, Fla.

STAGGERED JOINT METHOD OF APPLICATION

Application must be started true to line. When an overhang is desired stretch a guide line making allowance for a six to nine inch overhang, as may be required.

Begin to apply the sheets at the eaves, starting at the left with a full width sheet, overhanging the purlin by two corrugations at the rake, with the lower end of the sheet against the line stretched for the overhang. The upper end of the sheet must extend at least three inches beyond the top of the purlin.

Fasten and clip the lower end of the sheet to the eave purlin.

The second sheet is applied in perfect alignment with the first sheet overlapping two corrugations of the first sheet with two corrugations of the second. Fasten and clip the lower end of the sheet to the eave purlin, making sure that the first bolt assembly is through the first corrugation of the second sheet, the second bolt assembly through the crest of the sixth corrugation and the third bolt assembly through the crest of the eleventh corrugation.

Apply the third sheet like the second, overlapping two corrugations, and fastening the lower edge of the sheet as described above.

Each successive sheet in the first course should be applied in a like manner to the end of the course. Be sure to allow for a two corrugation overhang at the gable on the right end.

To apply the first sheet on the second course take a full size sheet and cut off two corrugations. Place this sheet so that the outside line of it is in perfect alignment with the first sheet of the first course, and the lower part of it overlaps the top of the underlying sheet at least six inches. Fasten the lower end of this sheet and the upper end of the first sheet of the first course.

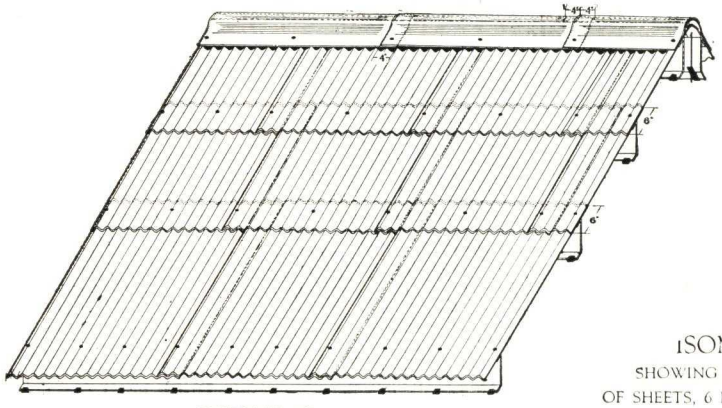
Continue to apply the second course sheets across the roof with full width sheets, overlapping each successive sheet two corrugations over the preceding sheet. Fasten the lower end of this sheet and the upper end of the sheets of the underlying course, using one complete bolt assembly in the crest of the first corrugation and one complete bolt assembly in the crest of the seventh corrugation.

After the end laps have been properly fastened to the purlins or girts, bolt sheets to the intermediate purlins using one bolt assembly in the crest of the first corrugation of each sheet and one bolt assembly in the crest of the seventh corrugation of each sheet.

Snap a chalk line across the roof as a guide to insure proper alignment of all sheets.

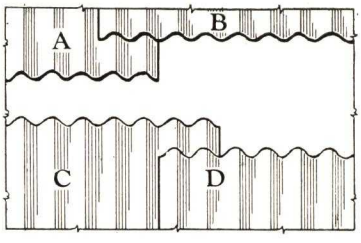
To apply the first sheet of the third course, take a full size sheet and cut off four corrugations. Place this sheet so that the outside edge is applied in perfect alignment with the outside edges of the first sheets on the first and second courses, overlapping the upper end of the first sheet of the second course at least six inches.

Continue to apply the third course sheets using full width sheets overlapping each succeeding sheet two corrugations over the preceding sheet. Bolt as described above for the second course sheets. For subsequent courses continue staggering, applying and fastening in a like manner. See detail Q, R, S and T, below.

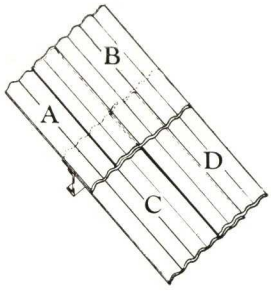


DETAIL Q

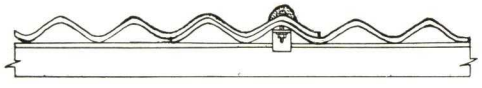
ISOMETRIC
SHOWING ARRANGEMENT
OF SHEETS, 6 INCH END LAP AND
2 CORRUGATION (5 1/4") SIDE LAP



JOINT OPEN
DETAIL R



JOINT CLOSED
DETAIL S



DETAIL SHOWING OVERLAP
DETAIL T

CUT CORNER METHOD OF APPLICATION

Cut corners butt together and are overlapped by the uncut corner of the next sheet making a watertight joint at the intersection of sheets. See drawing below.

The first course is applied by commencing at the left with a full width sheet (marked A), overhanging the end of the purlin by two corrugations with the lower end of the sheet against the line stretched as a guide to allow for the overhang. The upper end of the first course of sheets must extend at least three inches beyond the top line of the upper purlin.

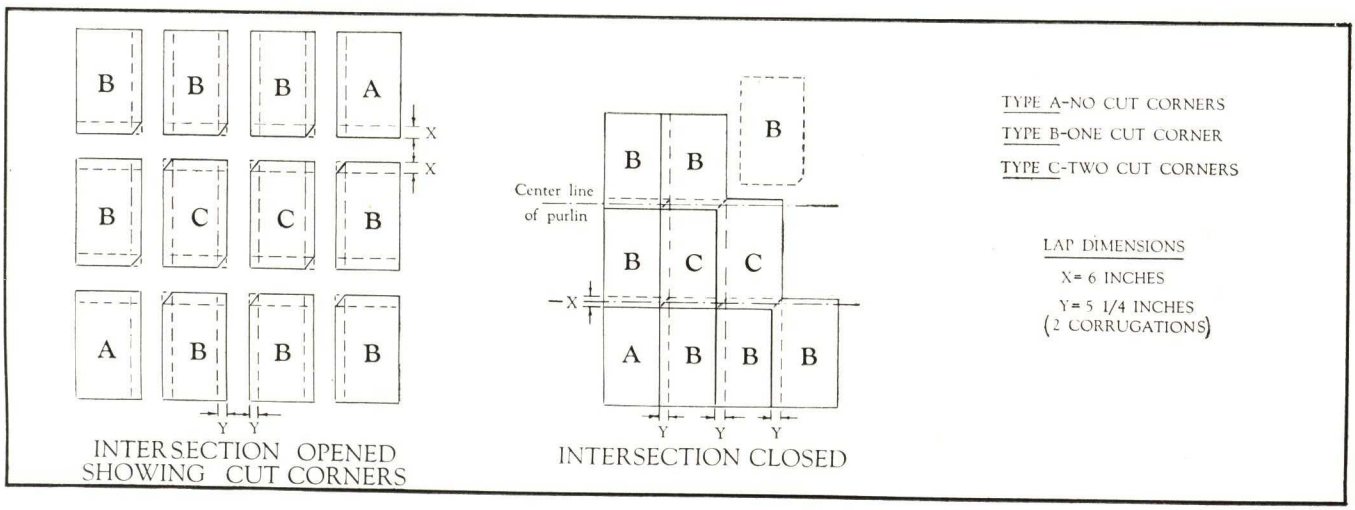
The next sheet (marked B), is applied in perfect alignment with the first sheet (A) overlapping two corrugations of the first sheet with two corrugations of sheet B. It will be noted from detail below that the upper left hand corner of sheet B is clipped off. Apply the third sheet in the same manner as the second sheet and subsequent sheets of the first course in a like manner, all sheets having the upper left hand corner clipped. The lower end of this course of sheets should be fastened to the eave purlin with three bolt assemblies per sheet, the first bolt assembly to be placed in the crest of the first corrugation, the second bolt assembly in the crest of the sixth corrugation, and the third bolt assembly in the crest of the eleventh corrugation.

The first sheet of the second course and successive courses, not including the ridge course, marked "B" is applied with the clipped off portion in the lower right hand corner.

Do not stagger the sheets. Apply them in perfect alignment as shown in detail below. The lower end of this course and successive courses as well as all intermediate purlins should have the sheets fastened to them with two complete bolt assemblies, the first to be placed in the crest of the first corrugation and the second in the crest of the seventh corrugation.

Succeeding sheets of this course, marked "C," are applied in perfect alignment with the first sheet of this course, overlapping each sheet two corrugations over the preceding sheet. The type "C" sheet is used for the remaining sheets in this course, and it will be noted that the Type "C" sheet has both the upper left and the lower right hand corner clipped off. The last sheet on this course, it will be noted is a Type "B" sheet.

The ridge or top course is applied in the same manner as the first course, with the exception that the position of the sheets is exactly reversed, the first and succeeding sheets of the course being Type "B" sheets with the lower right hand corner clipped off and the final finishing sheet a Type "A" sheet, that is with all corners unclipped.



METHODS OF FASTENING

BOLT AND CLIP METHOD FOR ROOFING

When the flanges of the roof purlins are turned "down," use two "J" clips, two galvanized bolts of the proper length with nuts, two lead washers, and two galvanized washers per sheet per purlin—except at the eave and ridge purlin. At the eave and ridge purlin three complete fastener assemblies must be used. The first fastener assembly is to be placed through the crest of the first corrugation on the eave and ridge purlin, the second through the crest of the sixth corrugation, and the third through the crest of the eleventh corrugation, and on subsequent purlins the first bolt assembly is to be placed through the crest of the first corrugation, and the second through the crest of the seventh corrugation. This method is known as the single "J" clip method and is shown in detail A on the next page.

All bolts must be ¼ in. in diameter, and at least three inches longer than the depth of the purlin on which they are to be used. When the flanges of the roof purlins are turned "up," either the double "J" clip method or the "Z" clip method of fastening can be used. The double "J" clip method is shown in detail B and the "Z" clip method in detail C.

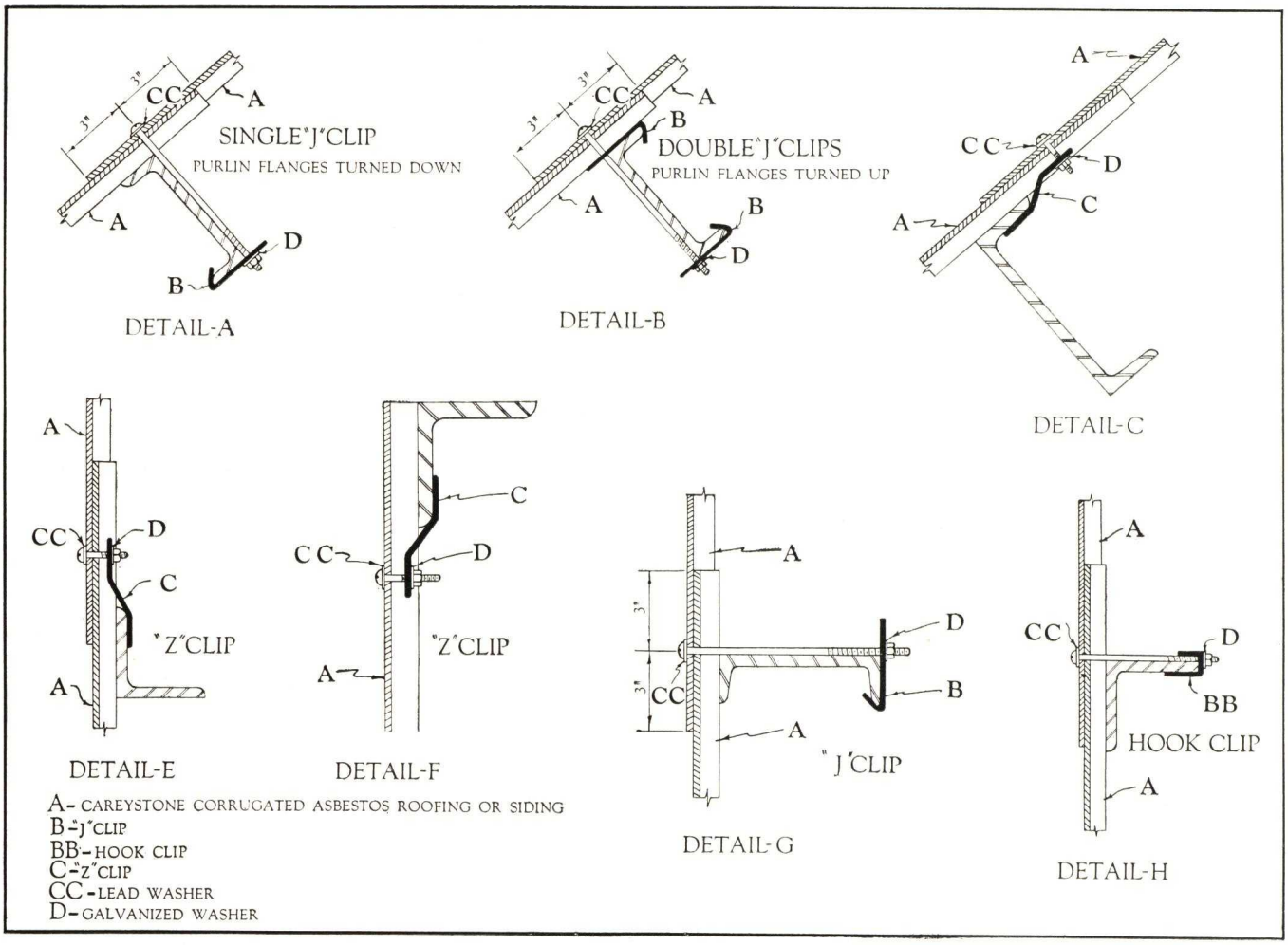
If the double "J" clip method is to be used, use the same number of bolt assemblies as described in the single "J" clip method, but doubling the number of "J" clips. All assemblies to be placed as described above. If the "Z" clip method of fastening is to be used, estimate the number of bolt assemblies required in exactly the same manner as described above for the single "J" clip method, with the exception that "Z" clips are to be used rather than "J" clips, and all bolts must be two inches in length. All assemblies to be placed as described above for the "J" clip method.

BOLT AND CLIP METHOD FOR SIDING

When the girts are channels with the flanges "up," or angles with one leg outside and up, and the other leg pointing in, the "Z" clip method of fastening may be used as described above for roofing and the quantities required are estimated in a like manner. The placing of the bolt assemblies is to be identical. Shown in detail E and detail F. When the girts are channels with the flanges pointing "down," the "J" clip method, as described above for roofing may be used, and the quantities required are estimated in a like manner.

The placing of the bolt assemblies is to be identical. Shown in detail G.

When the girts are angles with one leg "down" and one leg pointing "in" the "hook clip" method of fastening may be used. Figure the quantity of complete bolt assemblies required as described above for the "J" clip method for roofing, except that all bolts must be three inches longer than the leg of the angle that is pointing "in." Shown in detail H. The placing of angle girts with one leg facing out, and the other leg facing down or up should be avoided, as special methods of fastening and siding sheets must, in that event, be devised.



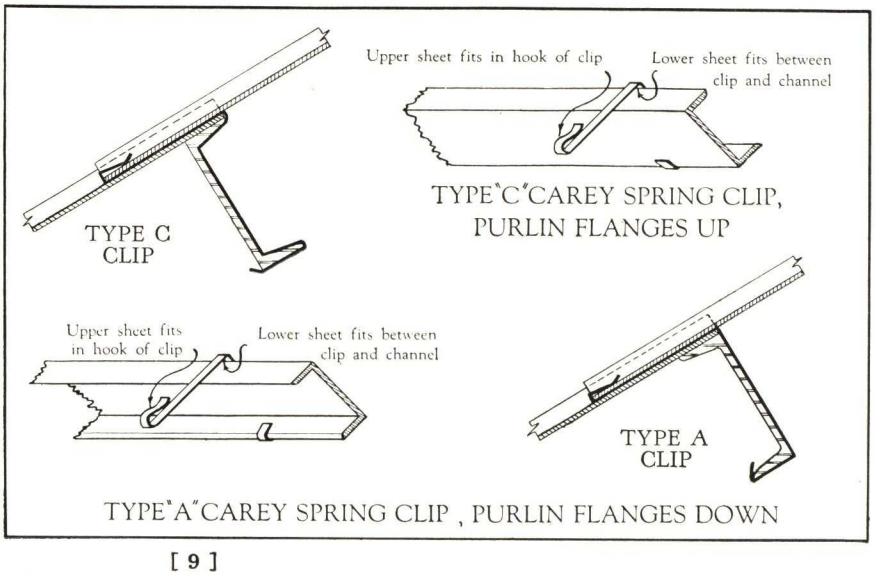
A- CAREYSTONE CORRUGATED ASBESTOS ROOFING OR SIDING
B - "J" CLIP
BB - HOOK CLIP
C - "Z" CLIP
CC - LEAD WASHER
D - GALVANIZED WASHER

CAREY SPRING CLIP METHOD FOR ROOFING

The use of Carey Spring Clips will materially reduce erection costs, though the cost of materials will be slightly increased because of the required lap of the sheets over each purlin.

This method of fastening can only be used with the staggered joint method of application, and is not to be used for the application of siding. It can only be used for roofing when the purlins are channels though the flanges of the channels may either be faced "up" or "down." Because of the fact that all the sheets must be of a length sufficient to cover one span only, the finished roof will have a much better appearance. At the eaves and ridge purlin either the "J" clip method or the "Z" clip method described above for roofing must be used and the required number of bolt assemblies estimated accordingly. On all other purlins use two Carey Spring Clips per sheet. The first Carey Spring Clip is to be placed in the vale between the first and second corrugations and the second Carey Spring Clip is to be placed in the vale between the seventh and eighth corrugations.

The size of the Carey Spring Clip to be used depends on the depth of the channel purlin and whether the flanges are faced up or down the roof.


TYPE C CLIP
Upper sheet fits in hook of clip
Lower sheet fits between clip and channel
TYPE "C" CAREY SPRING CLIP, PURLIN FLANGES UP
Upper sheet fits in hook of clip
Lower sheet fits between clip and channel
TYPE A CLIP
TYPE "A" CAREY SPRING CLIP , PURLIN FLANGES DOWN

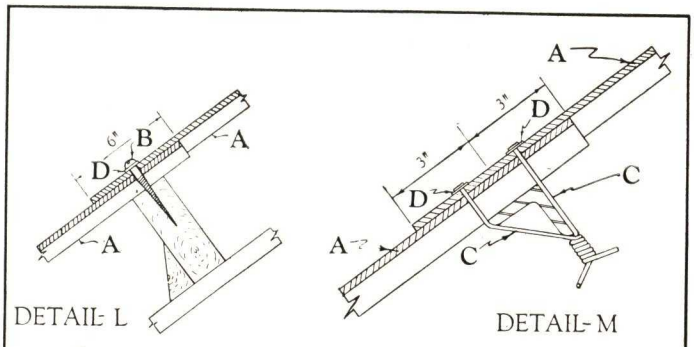
WOOD PURLINS OR GIRTS AND TIE WIRE METHOD

WOOD PURLINS OR GIRTS

When the building to be roofed and sided has wood purlins or girts, we recommend that Careystone Corrugated Asbestos-Cement Roofing and Siding be applied with 3 in. No. 14 brass wood screws. Under the head of each screw must be placed a lead washer, and in no case are the screws to be driven with a hammer. Use a screw driver. The number of brass screw and lead washer assemblies required is estimated in an identical manner described above for the "J" clip method for roofing. See detail L.

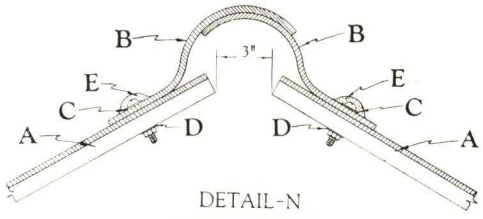
TIE WIRE METHOD

Under ordinary conditions we do not recommend the use of Tie Wires. Where conditions are altered their use is sometimes necessary. In that event we recommend the use of Aluminum Tie Wires. To obtain the number required multiply the number of purlins and girts by the number of sheets plus two, and double that result. Tie wires at least six inches longer than the depth of the purlin should always be used, viz: 6 in. purlins require 12 in. tie wires. Before using tie wires, we suggest that you consult our Engineering Department. See detail M.



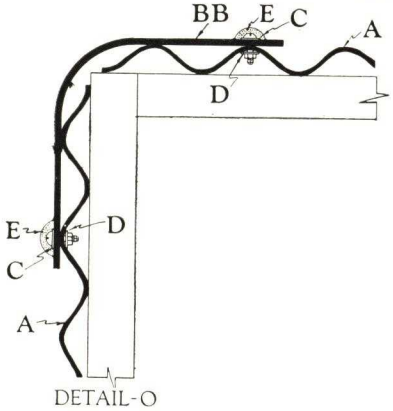
A - CAREYSTONE CORRUGATED ASBESTOS ROOFING OR SIDING
B - BRASS WOOD SCREWS
C - ALUMINUM TIE WIRES
D - LEAD WASHERS

APPLICATION OF RIDGE ROLL AND CORNER ROLL

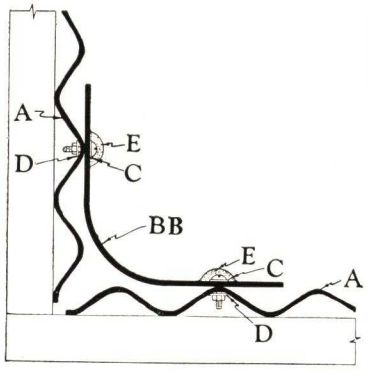


DETAIL-N
RIDGE ROLL

A - CAREYSTONE CORRUGATED ASBESTOS ROOFING OR SIDING
B - CAREYSTONE RIDGE ROLL
BB - CAREYSTONE CORNER ROLL
C - LEAD WASHERS
D - GALVANIZED WASHER
E - GRAY ROOF PUTTY

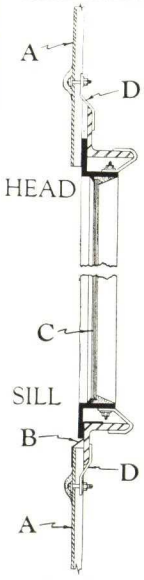


DETAIL-O
EXTERNAL
CORNER ROLL



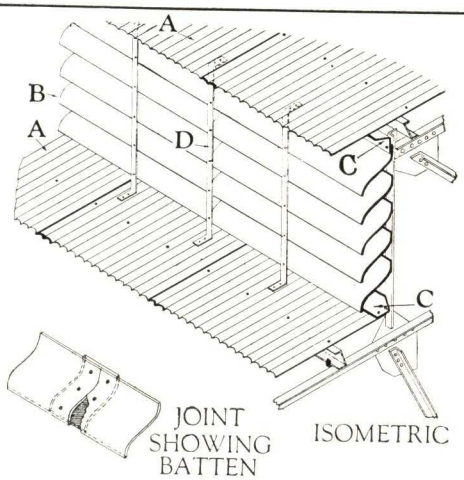
DETAIL-P
INTERNAL
CORNER ROLL

APPLICATION OF SIDING AT STEEL SASH AND OF ASBESTOS LOUVRE BLADES



JAMB

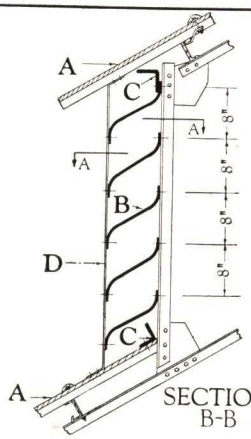
A - CAREYSTONE CORRUGATED ASBESTOS SIDING
B - METAL FLASHING
C - GLASS WINDOW
D - 'Z' CLIP
E - SHEETS BEDDED IN ROOFING CEMENT



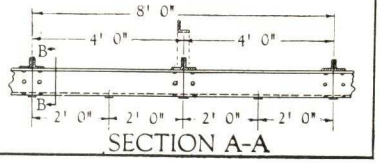
JOINT SHOWING BATTEN

ISOMETRIC

A - CAREYSTONE CORRUGATED ASBESTOS ROOFING
B - ASBESTOS LOUVRE BLADES
C - ASBESTOS CORNER ROLL
D - METAL SUPPORTS (BY OTHERS)



SECTION B-B



SECTION A-A

SUGGESTED SPECIFICATIONS

The roofing and siding shall be Careystone Corrugated Asbestos-Cement Roofing and Siding, the thickness of which shall be in accordance with the manufacturer's recommendations for span limits. All sheets shall be forty-two inches wide, being sixteen corrugations of two and five-eighths inches each.

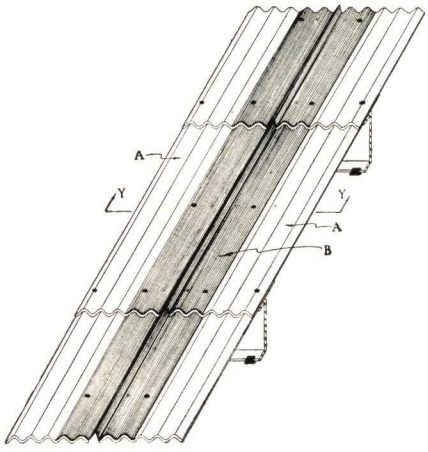
The sheets shall be manufactured solely from asbestos fibre and portland cement, and shall be rigid, true, and free from all defects. The ridge roll and corner roll shall be manufactured in a like manner.

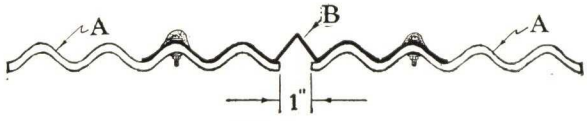
All end laps between sheets shall occur over a purlin or girt, and all sheets shall be fastened to the substructure in strict accordance with the manufacturers' instructions.

Before making shipment of the roofing and siding sheets, the manufacturer is to furnish the Engineers for approval detailed sheet layout blue prints.

The erection of the roofing and siding sheets shall be done in the best approved manner and shall be subject to approval by the manufacturers prior to acceptance.

EXPANSION JOINT AND FLASHING DETAILS

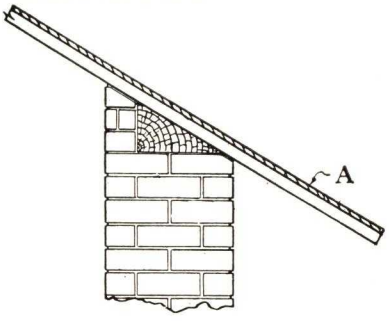




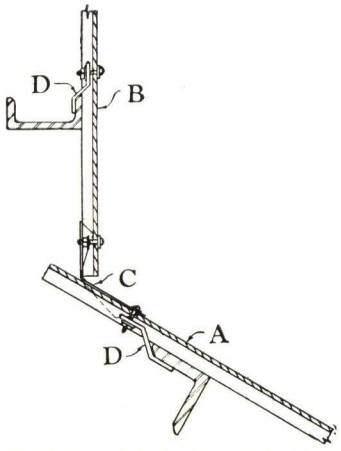
SECTION Y Y

EXPANSION JOINT

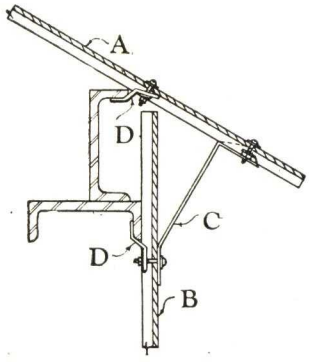
A - CAREYSTONE CORRUGATED ASBESTOS ROOFING AND SIDING
B - "V" CRIMP METAL



EAVE FLASHING FOR BRICK WALLS

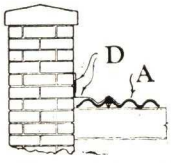


FLASHING AT BASE OF MONITOR



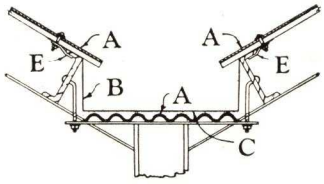
FLASHING AT EAVES

A - CAREYSTONE CORRUGATED ASBESTOS ROOFING
B - CAREYSTONE CORRUGATED ASBESTOS SIDING
C - METAL FLASHING HAMMERED INTO CORRUGATIONS
D - "Z" CLIP



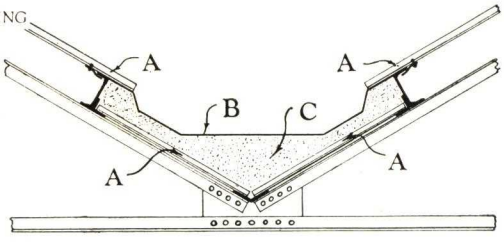
END WALL FLASHING DETAIL

A - CAREYSTONE CORRUGATED ASBESTOS ROOFING
D - METAL FLASHING



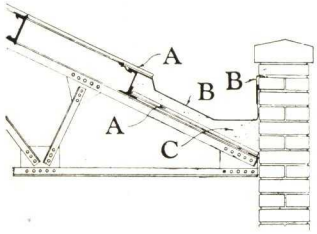
GUTTER FLASHING

A - CAREYSTONE CORRUGATED ASBESTOS ROOFING
B - METAL GUTTER
C - CEMENT GROUT
E - Z CLIP



VALLEY FLASHING

A - CAREYSTONE CORRUGATED ASBESTOS ROOFING
B - CAREY VALLEY MATERIAL OR METAL
C - CEMENT FILL



GUTTER FLASHING

CAREYSTONE ASBESTOS SHEATHING

(FLAT)

Careystone Asbestos Sheathing is manufactured of the same durable materials as Careystone Corrugated Asbestos Roofing and Siding, that is, asbestos fibre and portland cement, compressed under great hydraulic pressure. The resulting asbestos board is a flat, hard, dense, fireproof building material.

It is furnished in the following stock size sheets: 42x48 in.; 42x96 in.; 48x48 in.; and 48x96 in. Other sizes may be furnished from these stock sizes. It is manufactured in the following thicknesses: ⅛, 3/16, ¼, 5/16, ⅜, ½, ⅝, ¾, 1, 1¼, 1½ and 2 inches.

Careystone Asbestos Sheathing is fireproof, vermin proof, rustproof and will not corrode. It is weather-resistant and may be used for either exterior or interior sheathing.

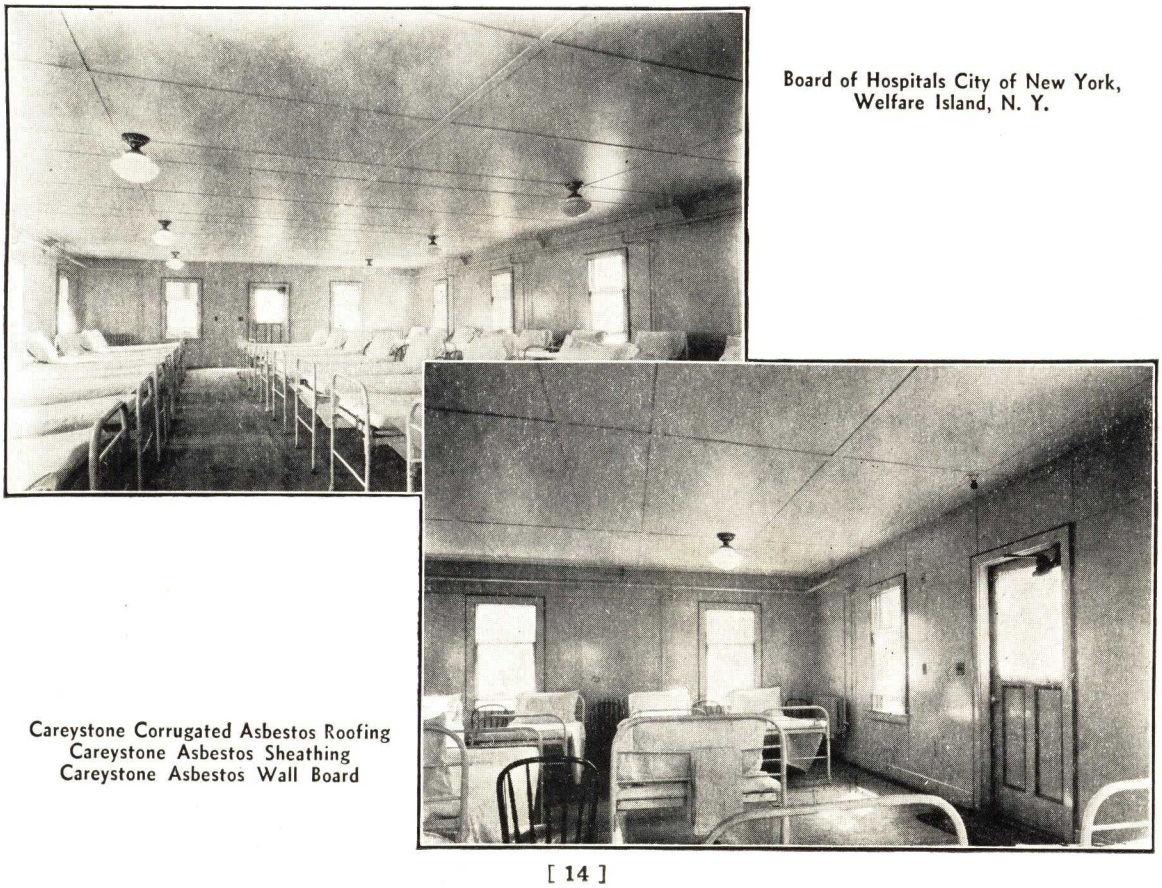
It may readily be cut, drilled and sawed, and is in general use for walls and ceilings, paneling, partitions, and has also been used extensively for doors, fume hoods, lockers, radiation shields, smoke ducts, and for a variety of other purposes.

It may be applied directly to steel or wood studs or on wood sheathing, and may be artistically decorated in any fashion. One of the main advantages of Careystone Asbestos Sheathing is that it is vermin and rat proof. Its smooth surface may be readily cleaned and it has the added advantage of being a material that does not absorb odors. For lining the walls of refrigerators it cannot be surpassed. Careystone Asbestos Sheathing has been used extensively in dairy barns poultry houses and general farm buildings; as it is fire-safe and hygienic. One of the best features of Careystone Asbestos Sheathing is that it may be worked with ordinary tools and does not require any special knowledge for its application.

Installation Data

When Careystone Asbestos Sheathing is to be used as walls or ceilings in new work, we urge that the studs be placed on 16 in. centers so that stock width sheets may be used without cutting. We recommend that the sheets be fastened to the studs with brass wood screws if the application is over wood studs, and with galvanized bolts, if the application is to be made on steel. For interior work copper or ordinary nails may sometimes be used to advantage. Joints between the sheets may be covered with batten strips cut from sheets in widths of from two inches up, although the smooth edges of each sheet permits them to be butted together at the studs, with pleasing effect.

Careystone Asbestos Sheathing is a building lumber having beauty, permanence, and is reasonably priced. For full particulars concerning the application of Careystone Asbestos Sheathing we suggest that you write our Engineering Department and discuss your problem. This service is without charge.



Board of Hospitals City of New York,
Welfare Island, N. Y.

Careystone Corrugated Asbestos Roofing
Careystone Asbestos Sheathing
Careystone Asbestos Wall Board

Carey PRODUCTS

BRANCH OFFICES AND DISTRIBUTORS

Albany, N. Y.	J. J. Fisher Company, Inc.	46 Spencer St.
Albuquerque, N. M.	P. O. Sorenson Company	924 No. First St.
Anderson, S. C.	Sullivan Hardware Company	
Atlanta, Ga.	The Philip Carey Company	666 Greenwood Ave., N. E.
Baltimore, Md.	The Philip Carey Company	1400 Moreland Ave.
Birmingham, Ala.	The Young & Vann Supply Co.	1725-1731 First Ave.
Boston, Mass.	The Philip Carey Company	88 Cambridge St., Charlestown
Bristol, Va.	Mitchell-Powers Hardware Company, Inc.	
Buffalo, N. Y.	The Carey Company, Inc.	1172-1178 Niagara St.
Charleston, S. C.	Wm. M. Bird & Company, Inc.	
Charlotte, N. C.	The Philip Carey Company	131 Brevard Court
	Guy M. Beaty Roofing Co.	520 Elliott St.
Chattanooga, Tenn.	James Supply Company	515 E. 11th St.
Chicago, Ill.	Illinois Philip Carey Company	2100 Fullerton Ave.
Cincinnati, Ohio	The Philip Carey Co. (Cincinnati Branch)	N. W. Cor. 8th and Broadway
	The Breese Bros. Co.	2347 Reading Road
Cleveland, Ohio	The Carey Company, Inc.	5906-5916 Euclid Ave.
Columbus, Ohio	The Philip Carey Company	32 East Swan St.
Dallas, Tex.	The Philip Carey Company	417 Magnolia Bldg.
Dayton, Ohio	The Philip Carey Company	Weakley St. and B. & O. Ry.
Detroit, Mich.	The Carey Company, Inc.	6197 Hamilton Ave.
Ft. Smith, Ark.	Dyke Bros.	So. Ninth and D St.
Hartford, Conn.	The Guernsey-Westbrook Co.	650 Main St.
Huntington, W. Va.	Banks-Miller Supply Co.	742 Third Ave.
Indianapolis, Ind.	The Philip Carey Company	1111 E. 19th St.
Jacksonville, Fla.	The Philip Carey Company	605 E. Forsyth St.
	The Cameron & Barkley Co.	605 E. Forsyth St.
Kansas City, Mo.	The Philip Carey Company	2008-2010 McGee St.
Knoxville, Tenn.	A. G. Heins Company	116-126 Heins St.
Los Angeles, Calif.	Warren & Bailey Co.	350 So. Anderson St.
Louisville, Ky.	Walter L. Lacy Company, Inc.	1032-1044 So. Eighth St.
Memphis, Tenn.	Fischer Lime & Cement Co.	263-295 Walnut St.
Miami, Fla.	The Cameron & Barkley Co.	727 N. W. 1st Ave.
Minneapolis, Minn.	The Philip Carey Company	201 No. Third St.
	W. S. Nott Company	2nd Ave. North and 3rd St.
Mobile, Ala.	Turner Supply Co.	St. Louis and Commerce Streets
Montreal, P. Q., Can.	The Canadian Asbestos Company	322 Youville Square
Nashville, Tenn.	T. L. Herbert & Sons	174 Third Ave., N.
Newark, N. J.	J. J. Fisher Company, Inc.	389 Park Ave.
New Orleans, La.	The Philip Carey Company	422 Audubon Bldg.
New York, N. Y.	The Philip Carey Company,	Lincoln Bldg., 60 E. 42nd St.
	The Philip Carey Co. (Foreign Div.)	44 Whitehall St.
	Robert A. Keasby Co.	141 W. 19th St.
	Whitmer, Incorporated	500 Fifth Ave.
	J. J. Fisher Company, Inc.	186 15th St., Brooklyn
Omaha, Neb.	The Philip Carey Company	333-335 Keeline Bldg.
Philadelphia, Pa.	The Philip Carey Company	24th and Sedgley Ave.
Phoenix, Ariz.	Consolidated Rfg. & Supply Co.	1214 W. Madison St.
Pittsburgh, Pa.	The Philip Carey Company	Corliss Station
Portland, Ore.	Pacific Asbestos & Supply Company	Front and Clay Sts.
Richmond, Va.	Virginia Steel Company, Inc.	17th and Dock Sts.
St. Louis, Mo.	The Philip Carey Company	4485-4487 Duncan Ave.
St. Petersburg, Fla.	The Southern Equipment Company	P. O. Box 1798
Sacramento, Calif.	Allyn L. Burr Company	11th and R St.
Salt Lake City, Utah	The Philip Carey Company	525 Continental Bank Bldg.
San Francisco, Calif.	Jones Bros. Asbestos Co.	370 Second St.
Seattle, Wash.	Pioneer Sand & Gravel Co., Inc.	901 Fairview Ave., N.
Spokane, Wash.	Nott-Atwater Company	South 157 Monroe St.
Tacoma, Wash.	George Scofield Company	1543 Dock St.
Tampa, Fla.	The Cameron & Barkley Co.	So. Franklin St.
Toronto 9, Ont., Can.	Robt. T. Purves & Company	96-98 Vine Ave., West Toronto
Washington, D. C.	Asbestos Covering & Roofing Company	4104 Georgia Avenue, N. W.
Wheeling, W. Va.	The Philip Carey Company	Chapline at 18th St.